

IN THE CLAIMS:

The following is a complete listing of the claims, and replaces all earlier version and listings.

1. (Currently Amended) An energization processing apparatus for performing, ~~in a reduced-pressure atmosphere~~, an energization process on electric conductors which are placed on a substrate, comprising:

a vessel which has an exhaust hole and which covers the electric conductors and a part of surface of the substrate where the electric conductors are placed, to create an airtight atmosphere between the substrate and the vessel,

a first temperature adjusting mechanism for adjusting temperature of an area of the part of the substrate inside the vessel; and

a second temperature adjusting mechanism for adjusting temperature of an area of the substrate outside the vessel,

wherein a temperature of the second temperature adjusting mechanism is higher than that of the first temperature adjusting mechanism so as to reduce a temperature difference, caused by a difference of a heat transfer to an atmosphere, between the area of the part of the substrate inside the vessel and the area of the substrate outside the vessel.

2. (Canceled)

3. (Currently Amended) An energization processing method for performing, ~~in a reduced-pressure atmosphere~~, an energization process on electric conductors which are placed on a substrate, comprising the steps of:

- covering the electric conductors and a part of surface of the substrate where the electric conductors are placed with a vessel which has an exhaust hole, to create an airtight atmosphere between the substrate and the vessel;
- reducing a pressure of the airtight atmosphere, and
- heating an area of the part of the substrate inside the vessel by a first temperature adjusting mechanism, and an area of the substrate outside the vessel by a second temperature adjusting mechanism, wherein a temperature of the second temperature adjusting mechanism is higher than that of the first temperature adjusting mechanism so as to compensate for a temperature difference, caused by a difference of a heat transfer to an atmosphere, between the area of the part of the substrate inside the vessel and the area of the substrate outside the vessel.

4. - 7. (Canceled)

8. (Currently Amended) An electron source manufacturing method by energizing, ~~in a reduced-pressure atmosphere~~, electric conductors which are placed on a substrate to form electron-emitting regions in the electric conductors, comprising steps of:

covering the electric conductors and a part of a surface of the substrate where the electric conductors are placed with a vessel which has an exhaust hole, to create an airtight atmosphere between the substrate and the vessel;

reducing a pressure of the airtight atmosphere; and

heating an area of the part of the substrate inside the vessel by a first temperature adjusting mechanism, and an area of the substrate outside the vessel by a second temperature adjusting mechanism, wherein a temperature of the second temperature adjusting mechanism is higher than that of the first temperature adjusting mechanism so as to compensate for a temperature difference, caused by a difference of a heat transfer to an atmosphere, between the area of the part of the substrate inside the vessel and the area of the substrate outside the vessel, and energizing the electric conductors.